

# Mineral Industry Surveys

---

For information, contact:

Robert G. Reese, Jr., Vanadium Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4981, Fax: (703) 648-7757  
E-mail: [reese@usgs.gov](mailto:reese@usgs.gov)

Loren Duncan (Data)  
Telephone: (703) 648-7972  
Fax: (703) 648-7975

MINES FaxBack: (703) 648-4999  
Internet: <http://minerals.usgs.gov/minerals>

## VANADIUM IN AUGUST 1999

According to *Metal Bulletin*, U.S. ferrovanadium prices during August ranged from \$5.10 to \$5.25 per pound of vanadium content, unchanged from the ranges reported for June and July. The range for European ferrovanadium prices was \$10.20 to \$10.50 per kilogram in August. In July, European ferrovanadium prices ranged from \$10.30 to \$10.60. For vanadium pentoxide, the August range as published by *Metal Bulletin* was \$1.93 to \$2.10 per pound, while in July it was \$2.00 to \$2.13.

Prices for vanadium pentoxide and ferrovanadium remained

low during August. Traders in the vanadium market attributed the weak prices primarily to the increased availability of material from Russia (Ryan's Notes, 1999).

### Reference Cited

Ryan's Notes, 1999, Ferrovanadium is slumping with scattered summer sales:  
Ryan's Notes, v. 5, no. 32, August 9, p. 3.

TABLE 1  
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM 1/

(Kilograms, contained vanadium)

	1998		1999			
	Consumption	Stocks	July		August	
			Consumption	Stocks	Consumption	Stocks
Ferrovandium 2/	4,010,000	302,000	271,000 r/	292,000	282,000	288,000
Vanadium-aluminum alloy	W	9,000	W	12,600 r/	W	12,400
Other 3/	387,000	3,000	36,900 r/	9,430 r/	38,400	9,300
Total	4,390,000	314,000	308,000 r/	314,000	320,000	310,000

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol "W."

TABLE 2  
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1998	1999		
		July	August	Year to date
Steel:				
Carbon	1,650,000	101,000 r/	111,000	776,000
High-strength low-alloy	950,000	79,300 r/	82,300	647,000
Stainless and heat-resisting	42,400	4,030	2,450	48,600
Full alloy	891,000	64,000 r/	66,200	598,000
Tool	269,000	23,500	25,800	224,000
Total steel	3,800,000	272,000 r/	288,000	2,290,000
Superalloys	19,900	1,250	1,290	10,300
Miscellaneous and unspecified 2/	571,000	34,500	30,800	303,000
Total consumption	4,390,000	308,000 r/	320,000	2,610,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3  
U. S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND  
VANADIUM METAL, INCLUDING WASTE AND SCRAP 1/

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	298,000	\$496,000	12,200	\$491,000
1999:				
May	--	--	2,320	65,700
June	1,110,000	1,550,000	22	17,700
July:				
Germany	--	--	470	25,400
Year to date p/ 2/	1,110,000	1,550,000	20,200	474,000
Exports:				
1998	856,000	11,500,000	346,000	7,160,000
1999:				
May	19,800	258,000	18,600	352,000
June	8,700	112,000	9,650	225,000
July:				
Australia	--	--	30	3,410
Belgium	18,100	532,000	--	--
Canada	28,200	367,000	--	--
Germany	3,660	47,600	1	3,390
Israel	267	3,460	--	--
Italy	245	7,200	--	--
Japan	2,370	69,700	45	4,540
Mexico	8,480	126,000	--	--
United Kingdom	--	--	17,400	299,000
Total	61,400	1,150,000	17,500	310,000
Year to date	238,000	3,470,000	114,000	2,180,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to previous months' data.

Source: Bureau of the Census.

TABLE 4  
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND  
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	1,620,000	\$39,300,000	847,000	\$12,300,000	33,000	\$574,000
1999:						
May	195,000	2,150,000	1,000	12,200	--	--
June	179,000	1,910,000	1,120	57,200	--	--
July:						
Austria	53,900	562,000	--	--	--	--
Canada	21,500	232,000	--	--	--	--
China	31,900	325,000	--	--	--	--
South Africa	16200	163000	46,800	412,000	--	--
Total	124,000	1,280,000	46,800	412,000	--	--
Year to date	914,000	11,000,000	77,300	834,000	--	--
Exports:						
1998	579,000	13,700,000	681,000	6,850,000	232,000	2,830,000
1999:						
May	16,700	228,000	121,000	635,000	5,900	77,700
June	4,550	68,500	118,000	532,000	20,700	157,000

See footnotes at end of table.

TABLE 4--Continued  
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND  
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Exports--Continued:						
July:						
Belgium	--	--	--	--	6,910	\$70,000
Canada	20,700	\$284,000	--	--	--	--
Italy	--	--	16,000	\$82,900	--	--
Trinidad and Tobago	--	--	1,800	10,100	--	--
Total	20,700	284,000	17,800	93,000	6,910	70,000
Year to date p/ 3/	165,000	2,430,000	603,000	3,490,000	56,000	533,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include catalysts containing vanadium pentoxide.

3/ May include revisions to previous months' data.

Source: Bureau of the Census.

TABLE 5  
U. S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG 1/

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	3,030,000	\$9,960,000	2,280,000	\$1,710,000	1,250,000	\$10,500,000
1999:						
May	287,000	242,000	234,000	112,000	--	--
June	178,000	2,220,000	240,000	112,000	290,000	405,000
July:						
Canada	--	--	129,000	103,000	--	--
Mexico	104,000	518,000	--	--	--	--
Total	104,000	518,000	129,000	103,000	--	--
Year to date	1,380,000	5,820,000	1,250,000	677,000	569,000	963,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6  
U. S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS 1/

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	350	\$19,300	129,000	\$1,410,000
1999:				
May	--	--	576	55,200
June	--	--	16,600	196,000
July:				
Germany	--	--	2,920	43,200
Year to date	--	--	60,800	721,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.